

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : William F. Krupke Docket No. : BK-1B
Serial No. : Art Unit :
Filed : Examiner :
For : Diode-Pumped Alkali
 Amplifier

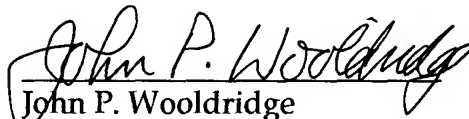
INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Forwarded herewith is an Information Disclosure Statement, Form-1449, in
the above-identified application. Copies of the cited references are enclosed.

Respectfully submitted,


John P. Wooldridge
Agent for Applicant
Registration No. 38,725

Dated: September 9, 2003

Enclosure:
As noted above

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Atty Dock t No. BK-1B		Serial No.	
INFORMATION DISCLOSURE STATEMENT STATEMENT BY APPLICANT				Applicant William F. Krupke	
(us several sheets if n cessary)				Filing Date	Group
U.S. PATENT DOCUMENTS					
Examiner Initial	Document Number	Date	Name	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
	6,160,934	12/12/00	Raymond J. Beach et al.	Throughout patent	
	5,289,481	2/22/94	Ping Xie et al	Throughout patent	
	4,807,240	2/21/89	Goldstone et al	Throughout patent	
	6,331,993	12/18/01	DAVID C. BROWN	Throughout patent	
OTHER DISCLOSURES (including Author, Title, Date, Pertinent Pages, Place of Publication, Etc.)					
Examiner's Initials	Cite No.	Include name of author (in CAPITOL Letters), title of the article, title of the item, date, pages, volume-issue numbers, publisher, city and/or country where published			T
	1	STEPHEN ANDERSON, "Review and Forecast of the Laser Markets; Part I: Nondiode Lasers", Laser Focus World, PennWell Publishers, January, 2001			
	2	PETER LOOSEN, "Lasers in Materials Processing", Advances in Lasers and Applications, pp287-317, Proc. 52 nd Scottish Univ. Summer School in Physics, St. Andrews, Sept. 1998			
	3	W. SCHULZ and R. POPRAWA, "Manufacturing with Novel High-Power Diode Lasers", IEEE J. Selected Topics in Quantum Electronics, 6, 696 (2000)			
	4	M. S. ALBERT and D. BALAMORE, "Development of Hyperpolarized Noble Gas MRI", Nuclear Instruments and Methods in Physics Research, A402, 441 (1998)			
	5	I. A. NELSON, B. CHANN, and T. G. WALKER, "Spin-exchanged Optical Pumping Using a Frequency-Narrowed, High-Power Diode Laser", Appl. Phys. Lett., 76, 1356 (2000)			
	6	H. TREUSCH, ET. AL., "compact High Brightness and High Power Diode Laser Source for Materials Processing", SPIE, 3945, 23 (2000)			
	7	G. SCHMIDT, ET. AL., "New Diode Pumped Multi kW Solid State Laser- Modeling of the Performance in Comparison with Experimental Results", SPIE, Vol 3613, pp8-15, (1999)			
	8	P. S. DOIDGE, "A Compendium and Critical Review of Neutral Atom Resonance Line Oscillator Strengths for Atomic Absorption Analysis", Spectrochimica Acta., 50B, 209 (1995)			
Examiner					
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	9	S. CH'EN and M TAKEO, "Broadening and Shift of Spectral Lines Due to the Presence of Foreign Gases", Rev. Mod. Phys., 29, 20 (1957)	
	10	W. R. HINDMARSH and J. M. FARR, "Collision Broadening of Spectral Lines by Neutral Atoms", Prog. In Quantum Electronics, 2, 141 (1972)	
	11	R. O. GARRETT and S. Y. CH'EN, "Pressure Effects of Foreign Gases on the Absorption Lines of Cesium. II. The Effects of Helium on the First Two Members of the Principal Series", Phys. Rev., 144, 66 (1966)	
	12	M. D. ROTONDARO and G. P. PERRAM, "Collisional Broadening and Shift of the Rubium D ₁ and D ₂ Lines by Rare Gases, H ₂ , D ₂ , N ₂ , CH ₄ , and CF ₄ ", J. Quant. Radiat. Transfer, 57, 497 (197)	
	13	L. KRAUSE, "Collisional Excitation Transfer Between the ² P _{1/2} and ² P _{3/2} Levels in Alkali Atoms", Applied Optics, 5, 1375 (1966)	
	14	E. S. HRYCYSHYN and L. KRAUSE, "Inelastic Collisions Between Excited Alkali Atoms and Molecules, VII. Sensitized Fluorescence and Quenching in Mixtures of Rubidium with H ₂ , HD, D ₂ , N ₂ , CH ₄ , CD ₄ , C ₂ H ₄ , and C ₂ H ₆ .", Can. J. Phys., 48, 2761 (1970)	
	15	E. WALENTYNOWICZ, et. al., "Inelastic Collisions Between Excited Alkali Atoms and Molecules X. Temperature Dependence of Cross Sections for ² P _{1/2} - ² P _{3/2} Mixing in Cesium, Induced in Collisions with Deuterated Hydrogens, Ethanes, and Propanes", Can. J. Phys., 52, 589 (1974).	
	16	Z. KONEFAL, "Observation of Collision Induced Processes in Rubium-Ethane Vapour", Optics Communications, 164, 95 (1999)	
	17	E. SPELLIER et al, "Quenching Cross Sections for Alkali-Inert Gas Collisions", Z. Phys., A291, 311 (1979)	
	18	B. A. GLUSHKO et al. "Processes of Stimulated Electronic Raman Scattering and Stimulated Resonance Emission in Potassium Vapor in the Presence of a Buffer Gas". Opt. Spectrosc (USSR), 52, 458 (1982)	
	19	A. A. DABAGYAN et al., "Stimulated Processes in Potassium Vapor in the Presence of a Buffer Gas", Sov. Phys., JETP, 58, 700 (1983)	
	20	A. A. DABAGYAN et al., "Development over time in the Induced Resonant Processes in Potassium Vapor, in the Presence of Collisions", Izvestiya Alademii Nauk, SSR, Seriya Fizicheskaya, 47, 1609 (1983)	
Examiner			
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	21	S. N. ATUTOV, A. I. PLEKHANOV, and A. M. SHALAGIN, "Superluminosity on the Resonant Transition of Na Atoms under Optical Excitation", Opt. Spectrosc (USSR), 56, 134 (1984)	
	22	M. E. MOVSESYAN, T. O. OVAKIMYAN, and S. V. SHMAVONYAN, "Stimulated Processes in a Mixture of Rubidium Vapor and Buffer Gas Under Two Photon Excitation", Opt. Scpetrosc (USSR), 61, 285 (1986)	
	23	J. CZUB, J. FIUTAK, and W. MIKLASZEWSKI, "On Collision- Induced Amplified Emission of Alkali Atoms", Z. Phys., D3, 23 (1986)	
	24	A. M. DAVTYAN, M. E. MOVSESYAN, A. V. Papoyan, and S. V. Shmavonyan, "Laser Resonance Radiation at the Atomic-Potassium D1 Line", Opt. Spectrosc (USSR), 66, 686 (1989)	
	25	Z. KONEFAL and M. IGNACIUK, "Stimulated Collision Induced Processes in Sodium Vapor in the Presence of Helium", Appl. Phys., B51, 285 (1990)	
	26	Z. KONEFAL and M. IGNACIUK, "Observation of Collision- Induced Amplified Emission in Na-Noble-Gas System", Z. Phys., D27, 49 (1993)	
	27	Z. KONEFAL and M. IGNACIUK, "Investigation of Collisionally Induced Stimulated Scattering in Sodium Vapor with Temporal and Spectral Resolution", Appl. Phys., B61, 101 (1995)	
	28	J. CZUB, J. FIUTAK, and W. MIKLASZEWSKI, "Influence of Resonant Pulse Propagation on Collision-Induced Stimulated Effects in the $^2S_{1/2}$ - $^2P_{1/2,3/2}$ System", Phys. Rev., A54, 746 (1996).	
	29	Z. KONEFAL and M. IGNACIUK, "Stimulated Processes in Sodium Vapor in the Presence of Molecular Buffer Gas Systems", Opt. And Quantum Electronics, 28, 169 (1996)	
	30	R. J. BEACH, "CW Theory of Quasi-Three-Level End-Pumped Laser Oscillators", Opt. Commun., 123, 385 (1995)	
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